

(c) REMARKS

The claims are 1-10 with claim 1 the sole independent claim. Claim 1 has been amended to better define the intended invention and reconsideration of the claims is expressly requested.

The amendment to claim 1 regarding the addition of from 3 to 60% by weight of the binder resin of the copolymer having an aliphatic conjugated diene compound as a monomer component is found on specification page 34, lines 4-13.

The Examiner has rejected claims 1-10 as either anticipated by Fujikawa '431 or as obvious over Fujikawa. The Examiner relies on the disclosure in paragraph [0178] of Fujikawa as teaching a copolymer of an aliphatic conjugated diene compound. The grounds of rejection are respectfully traversed.

Prior to addressing the grounds of rejection, Applicants believe it will be helpful to briefly review certain key features and advantages of the present claimed invention. The binder resin in the instant toner contains at least two components. The first component is a vinyl resin having a cross-linked structure formed by reacting a vinyl resin with a carboxyl group and a vinyl resin having an epoxy group. The cross-linked structure is formed by the carboxyl group reacting with the epoxy group of the vinyl resins.

The second component of the binder resin is a copolymer having an aliphatic conjugated diene compound as a monomer component present in amounts from 3 to 60% by weight of the binder resin.

Accordingly, the binder resin contains at least two different copolymers. The first has a cross-linked structure formed by reacting a vinyl resin with a carboxyl group

and vinyl resin with an epoxy group. The second discrete copolymer used with the first copolymer has an aliphatic conjugated diene compound as a monomer component and is present in amounts from 3 to 60% of the binder resin. As noted on specification page 33, line 26 to page 34, line 13, the binder resin in the toner of the present invention has a first copolymer formed from a vinyl monomer with a carboxyl group and a monomer with an epoxy group and a second copolymer which is incorporated in the binder resin. As noted on page 34, when the second diene copolymer is added in amounts less than 3% by weight or more than 60% by weight, then its effects tend to be negated. The use of the copolymer having the diene monomer component makes it possible to provide a toner with superior developing stability and performance.

This feature is further illustrated in instant Comparative Example 3 employing Toner 10. Toner 10 does not contain any of copolymer D-1. Copolymer D-1 is an aliphatic conjugated diene copolymer illustrated on pages 70 and 71 of the specification. The physical properties of the toner used in Comparative Example 3 are illustrated in Tables 4A and 4D and the results of the evaluation are in Table 5. As illustrated in Table 5, Comparative Example 3 employing Toner 10 showed more fog, lower image density and reduced fixing separation in all environments.

Fujikawa fails to teach a binder resin containing a first copolymer with a cross-linked structure formed by reaction of a carboxyl group of a first vinyl resin with an epoxy group of a second vinyl resin and a second copolymer having an aliphatic conjugated diene compound in amounts from 3 to 60% by weight of binder resin. Instead, as illustrated in paragraphs [0177-0178], Fujikawa merely discloses that the diene monomer is

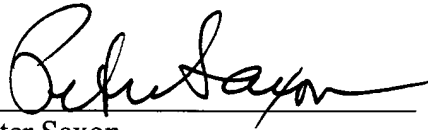
merely one of the monomers which is copolymerized with a monomer having a carboxyl group and the monomer having an epoxy group to form the first copolymer. Specifically, in paragraph [0177] it is said that a vinyl monomer copolymerized with the monomer having a carboxyl group and the monomer having an epoxy group can include butadiene and isoprene. This means that the butadiene is copolymerized with the vinyl carboxyl and vinyl epoxy monomers to form a terpolymer, or the like. This is not a mixture of separate copolymers. Further, Fujikawa discloses that the presence of the unsaturated polyenes is merely optional, nor is it said to add any additional properties or performance characteristics to the toner.

On the other hand, the results in Comparative Example 3 show that where a second copolymer formed from the diene monomer is not employed, that reduced performance was observed.

Wherefore, Applicants submit that Fujikawa fails to teach or suggest the present claimed invention nor render it unpatentable. It is respectfully requested that the claims be allowed and that the case be passed to issue.

Applicants undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Peter Saxon", written over a horizontal line.

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